



FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY DOCKET NO.	SERIAL NO.
		372465-00201	10/653,016
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		APPLICANT	
		KURANO,et al.	
		FILING DATE	GROUP
		August 28, 2003	1746

U.S. PATENT DOCUMENTS							
EXAMINER INITIALS	CITE No.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE If appropriate
WKE	AA	3,282,875	11/1/1966	Connolly et al.	260	29.6	
	AB	4,320,224	3/16/1982	Rose et al.	528	125	
	AC	4,330,654	5/18/1982	Ezzell et al.	526	243	
	AD	4,419,486	12/6/1983	Rose	525	534	
	AE	4,625,000	11/25/1986	Chao et al.	525	534	
	AF	5,122,587	6/16/1992	Heinz et al.	528	126	
	AG	5,248,566	9/28/1993	Kumar et al.	429	19	
	AH	5,272,017	12/21/1993	Swathirajan et al.	429	33	
	AI	5,438,082	8/1/1995	Helmer-Metzmann et al.	522	149	
	AJ	5,547,551	8/20/1996	Bahar et al.	204	296	
	AK	5,547,777	8/20/1996	Richards	429	32	
	AL	5,599,614	2/4/1997	Bahar et al.	442	171	
	AM	5,635,041	6/3/1997	Bahar et al.	204	282	
	AN	5,716,727	2/10/1998	Savinell et al.	429	33	
	AO	5,766,787	6/16/1998	Watanabe et al.	429	33	
	AP	5,942,347	8/24/1999	Koncar et al.	429	30	
	AQ	5,958,354	9/28/1999	Thompson et al.	423	328.1	
	AS	6,042,958	3/28/2000	Denton et al.	429	30	
	AT	6,045,935	4/4/2000	Ketcham et al.	429	30	
	AU	6,059,943	5/9/2000	Murphy et al.	204	296	
	AV	6,096,449	8/1/2000	Fuglevand et al.	429	13	
	AW	6,099,988	8/8/2000	Savinell et al.	429	189	
	AX	6,248,469	6/19/2001	Formato et al.	429	41	
	AR	6,355,149	3/12/2002	Soczka-Guth et al.	204	296	
	AY	6,387,230	5/14/2002	Murphy et al.	204	296	
	AZ	6,387,556	5/14/2002	Fuglevand et al.	429	22	
	BA	6,509,441	1/21/2003	Kerres	528	391	
	BB	6,521,690	2/18/2003	Ross et al.	524	445	
	BC	6,552,135	4/22/2003	Schnurnberger et al.	525	536	
	BD	6,576,100	6/10/2003	Arcella et al.	204	296	
V	BE	2002/91225	7/11/2002	McGrath et al.	528	170	9/20/2001
V	BF	2002/94466	7/18/2002	Kerres et al.	429	33	7/18/2002
WKE	BG	2003/0032739	2/13/2003	Kerres et al.	525	535	6/19/2002



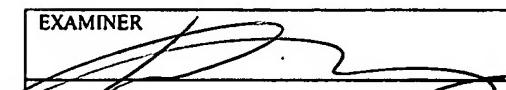
Serial No.: 10/653,016

OTHER DOCUMENTS (Including Author, Date, Pertinent Pages, etc.)

<i>WJL</i>	BH	ADJEMIAN, K.T. et al.; "Silicon Oxide Nafion Composite Membranes for Proton-Exchange Membrane Fuel Cell Operation at 80-140°C", Journal of the Electrochemical Society, 149 (3) A256-A261 (2002)
	BI	ARANDA, Pilar et al.; "Poly(ethylene oxide)/NH ₄ ⁺ -smectite nanocomposites"; Applied Clay Science 15 (1999) 119-135
	BJ	CHEN, Hsien-Wei et al.; "The novel polymer electrolyte nanocomposite composed of poly(ethylene oxide), lithium triflate and mineral clay"; Polymer 42 (2001) 9763-9769
	BK	COSTAMAGNA, P. et al., "Nafion 115/zirconium phosphate composite membranes for operation of PEMFCs above 100° C"; Electrochimica Acta 47 (2002) 1023-1033
	BL	COSTAMAGNA, Paola et al.; "Quantum jumps in the PEMFC science and technology from the 1960s to the year 2000, Part I. Fundamental scientific aspects"; Journal of Power Sources 102 (2001) 242-252
	BM	COSTAMAGNA, Paola et al.; "Quantum jumps in the PEMFC science and technology from the 1960s to the year 2000, Part II. Engineering, technology development and application aspects"; Journal of Power Sources 102 (2001) 253-269
	BN	JUNG, Doo Hwan et al.; "A performance evaluation of direct methanol fuel cell using impregnated tetraethyl-orthosilicate in cross-linked polymer membrane"; International Journal of Hydrogen Energy 26 (2001) 1263-1269
	BO	KAUR, S. et al.; "Cross-linking of sulfonated styrene-ethylene/butylene-styrene triblock polymer via sulfonamide linkages"; Polymer 43 (2002) 5163-5167
	BP	KERRES, J. et al.; "Application of Different Types of Polyaryl-Blend-Membranes in DMFC"; Journal of New Materials for Electrochemical Systems 5, 97-107 (2002)
	BQ	KERRES, J. et al.; "Synthesis and characterization of polyaryl blend membranes having different composition, different covalent and /or ionical cross-linking density, and their application to DMFC"; Desalination 147 (2002) 173-178
	BR	KIM, Yu Seung et al.; "Fabrication and characterization of heteropolyacid (H ₃ PW ₁₂ O ₄₀)/directly polymerized sulfonated poly(arylene ether sulfone) copolymer composite membranes for higher temperature fuel cell applications"; Journal of Membrane Science 212 (2003) 263-282
	BS	KOBAYASHI, T. et al.; "Proton-conducting polymers derived from poly(ether-etherketone) and poly(4-phenoxybenzoyl-1,4-phenylene)"; Solid State Ionics 106 (1998) 219-225
	BT	LIAO, Bing et al.; "Polymer-layered silicate nanocomposites. 1. A study of poly(ethylene oxide)/Na ⁺ - montmorillonite nanocomposites as polyelectrolytes and polyethylene-block-poly(ethylene glycol) copolymer/Na ⁺ - montmorillonite nanocomposites as fillers for reinforcement of polyethylene"; Polymer 42 (2001) 10007-10011
	BU	MIYAKE, N. et al.; "Evaluation of a Sol-Gel Derived Nafion/Silica Hybrid Membrane for Polymer Electrolyte Membrane Fuel Cell Applications"; Journal of The Electrochemical Society, 148 (8) A905-A909 (2001)
	BV	NUNES, S.P. et al.; "Inorganic modification of proton conductive polymer membranes for direct methanol fuel cells"; Journal of Membrane Science 203 (2002) 215-225
<i>WJL</i>	BW	PARK, Yong-il et al.; "Proton exchange nanocomposite membranes based on 3-glycidoxypropyltrimethoxysilane, silicotungstic acid and δ -zirconium phosphate hydrate"; Solid State Ionics 145 (2001) 149-160
<i>WJL</i>	BX	RUIZ-HITZKY, Eduardo et al.; "Proton conductivity in Al-montmorillonite pillared clays"; Solid State Ionics 85 (1996) 313-317

3/5/05

<i>Wke</i>	BY	SHIRAI, Masamitsu et al.; "Photo-assisted thermal crosslinking of polymers having imino sulfonate units"; <i>Reactive & Functional polymers</i> 37 (1998) 147-154
	BZ	STAITI, P. et al.; "Hybrid Nafion-silica membranes doped with heteropolyacids for application in direct methanol fuel cells"; <i>Solid State Ionics</i> 145 (2001) 101-107
	CA	STAITI, Pietro; "Proton conductive membranes based on silicotungstic acid/silica and polybenzimidazole"; <i>Materials Letters</i> 47 (2001) 241-246
	CB	SZÜCS, Anna et al.; "Preparation and hydrogen sorption of Pd nanoparticles on Al ₂ O ₃ pillared clays"; <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> 139 (1998) 109-118
	CC	TAZI, B. et al.; "Parameters of PEM fuel-cells based on new membranes fabricated from Nafion, silicotungstic acid and thiophene"; <i>Electrochimica Acta</i> 45 (2000) 4329-4339
	CD	TCHICAYA-BOUCKARY, L. et al.; "Hybrid Polyaryletherketone Membranes for Fuel Cell Applications"; <i>Fuel Cells</i> 2002, 2; No. 1, 1-6
	CE	TSYURUPA, M.P.; "Hypercrosslinked polymers: basic principle of preparing the new class of polymeric materials"; <i>Reactive and Functional Polymers</i> ; Vol. 53; Issues 2-3; December 2002; 193-203
	CF	XIAO, Guyu et al.; "Synthesis and characterization of novel sulfonated poly(arylene ether ketone)s derived from 4,4'-sulfonyl-diphenol"; <i>Polymer Bulletin</i> 48, 309-315 (2002)
<i>V</i>	CG	YAO, K.J. et al.; "Polymer/layered clay nanocomposites: 2 polyurethane nanocomposites" <i>Polymer</i> 43 (2002) 1017-1020
<i>Wke</i>	CH	ZAIDI S.M.J., et al.; "Proton conducting composite membranes from polyether ether ketone and heteropolyacids for fuel cell applications"; <i>Journal of Membrane Science</i> 173 (2000) 17-34

EXAMINER 	DATE CONSIDERED 3/5/05
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant	



FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY DOCKET NO. 372584-00201	SERIAL NO. 10/653,016
SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT		APPLICANT	
		KURANO, et al.	
		FILING DATE August 28, 2003	GROUP 1746

U.S. PATENT DOCUMENTS							
EXAMINER INITIALS	CITE No.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE If appropriate
<i>WJL</i>	AA	5,795,496	08/18/1998	YEN et al.	252	62.2	
	AD	6,355,370	03/12/2002	KATOH et al.	429	30	
	AB	6,365,294	04/02/2002	PINTAURO et al.	429	33	
	AC	6,523,699	02/25/2003	AKITA et al.	210	490	
	AE	6,706,834	03/16/2004	WLASSICS et al.	526	243	
	AF	2003/0059682	03/27/2003	KERR et al.	429	313	
	AG	2003/0153700	08/14/2003	WU et al.	526	247	
<i>WJL</i>	AH	2004/0122178	06/24/2004	HUANG et al.	525	221	
<i>WJL</i>	AI						

OTHER DOCUMENTS (Including Author, Date, Pertinent Pages, etc.)		
<i>WJL</i>	AJ	GRAVES, R. et al.; "Polyphosphazene Membranes. II. Solid-State Photocrosslinking of Poly [(alkylphenoxy) (phenoxy) phosphazene] Films"; Journal of Applied Polymer Science, Vol. 68. 827-836 (1998)
<i>WJL</i>	AK	KUVER, A. et al.; "Comparative study of methanol crossover across electropolymerized and commercial proton exchange membrane electrolytes for the acid direct methanol fuel cell"; Electrochimica Acta. Vo. 43, Nos 16-17, pp. 2527-2535, 1998

EXAMINER	<i>WJL</i>	DATE CONSIDERED	<i>3/5/05</i>
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant			